

CHAMBERS'S JOURNAL

OF
POPULAR

LITERATURE, SCIENCE, AND ART

Fifth Series

ESTABLISHED BY WILLIAM AND ROBERT CHAMBERS, 1832

No. 640.—VOL. XIII.

SATURDAY, APRIL 4, 1896.

PRICE 1½d.

THE MAHALAPSI DIAMOND.

A SOUTH AFRICAN STORY.

By H. A. BRYDEN.

CHAPTER I.

It was a fine warm evening at Kimberley, and Frank Farnborough, just before the dinner hour at the 'Central,' was fortifying his digestion with a glass of sherry and bitters, and feeling on very good terms with himself. He had put in an excellent day's work at De Beers, that colossal diamond company's office, where he had the good fortune to be employed, and had that morning received from his chief an intimation that his salary had been raised to four hundred pounds per annum. Four hundred per annum is not an immense sum in Kimberley, where living is dear all round; but for a young man of five-and-twenty, of fairly careful habits, it seemed not so bad a stipend. And so Frank sat down to the excellent *menu*, always to be found at the 'Central,' at peace with the world and with a sound appetite for his dinner. Next to him was a fellow-member of the principal Kimberley cricket team, and, as they were both old friends and enthusiasts, they chatted freely. Everywhere around them sat that curious commingling of mankind usually to be seen at a Kimberley *table d'hôte*—diamond dealers, Government officials, stock-brokers, detectives, Jews, Germans, Englishmen and Scots, and a few Irish, hunters and traders from the far interior, miners, prospectors, concessionaries, and others. A few women leavened by their presence the mass of mankind, their numbers just now being increased by some members of a theatrical company playing in the town.

As for Frank and his companion, they drank their tall tankards of cool lager, ate their dinners, listened with some amusement to the impossible yarns of an American miner from

the Transvaal, and, presently rising, sought the veranda chairs and took their coffee. In a little while Frank's comrade left him for some engagement in the town.

Frank finished his coffee and sat smoking in some meditation. He was on the whole, as we have seen, on good terms with himself, but there was one little cloud upon his horizon, which gave pause to his thoughts. Like many other young fellows, he lodged in the bungalow house of another man; that is, he had a good bedroom and the run of the sitting-rooms in the house of Otto Staarbrucker, an Afrikaner of mixed German and Semitic origin, a decent fellow enough, in his way, who ran a store in Kimberley. This arrangement suited Frank Farnborough well enough; he paid a moderate rental, took his meals at the 'Central,' and preserved his personal liberty intact. But Otto Staarbrucker had a sister, Nina, who played housekeeper, and played her part very charmingly. Nina was a colonial girl of really excellent manners and education. Like many Afrikanders, nowadays, she had been sent to Europe for her schooling, and having made the most of her opportunities, had returned to the Cape a very charming and well-educated young woman. Moreover, she was undeniably attractive, very beautiful most Kimberley folks thought her. On the mother's side there was blood of the Spanish Jews in her veins—and Nina, a sparkling yet refined brunette, showed in her blue-black hair, magnificent eyes, warm complexion, and shapely figure, some of the best points of that Spanish type.

These two young people had been a good deal together of late—mostly in the warm even-

ings, when Kimberley people sit in their verandas—stoeps, they call them in South Africa—cooling down after the fiery heat of the corrugated iron town. It was pleasant to watch the stars, to smoke the placid pipe, and to talk about Europe and European things to a handsome girl, who took small pains to conceal her friendliness for the strong, well set-up, manly Englishman, who treated her with the deference of a gentleman (a thing not always understood in South Africa), and withal could converse pleasantly and well on other topics than diamonds, gambling, and sport. Frank Farnborough, as he ruminated over his pipe this evening out there in the 'Central' forecourt—garden, I suppose one should call it—asked himself a plain question.

'Things are becoming "steep,"' he said to himself. 'I am getting too fond of Nina, and I half believe she's inclined to like me. She's a nice and a really good girl, I believe. One could go far for a girl like her. And yet—that Jewish blood is a fatal objection. It won't do, I'm afraid, and the people at home would be horrified. I shall have to chill off a bit, and get rooms elsewhere. I shall be sorry, very sorry, but I don't like the girl well enough to swallow her relations, even supposing I were well enough off to marry, which I am not.'

As if bent upon forthwith proving his new-found mettle, the young man soon after rose and betook himself along the Du Toit's Pan road, in the direction of his domicile. Presently he entered the house and passed through to the little garden behind. As his form appeared between the darkness of the garden and the light of the passage, a soft voice, coming from the direction of a low table on which stood a lamp, said, 'That you, Mr Farnborough?'

'Yes,' he returned, as he sat down by the speaker. 'I'm here. What are you doing, I wonder?'

'Oh, I'm just now deep in your *Malay Archipelago*. What a good book it is, and what a wonderful time Wallace had among his birds and insects; and what an interesting country to explore! This burnt-up Kimberley makes one sigh for green islands, and palm-trees, and blue seas. Otto and I will certainly have to go to Kalk Bay for Christmas. There are no palm-trees, certainly, but there's a delicious blue sea. A year at Kimberley is enough to try even a bushman.'

'Well,' returned Frank, 'one does want a change from tin shanties and red dust occasionally. I shall enjoy the trip to Capetown too. We shall have a pretty busy time of it with cricket in the tournament week; but I shall manage to get a dip in the sea now and then, I hope. I positively long for it.'

As Nina leaned back in her big easy-chair, in her creamy Surah silk, and in the half-light of the lamp, she looked very bewitching, and not a little pleased, as they chatted together. Her white teeth flashed in a quick smile to the compliment which Frank paid her, as the conversation drifted from a butterfly caught in the garden, to the discovery he had made that she was one of the few girls in Kimberley who

understood the art of arraying herself in an artistic manner. She rewarded Frank's pretty speech by ringing for tea.

'What a blessing it is,' she went on, leaning back luxuriously, 'to have a quiet evening. Somehow, Otto's friends pall upon one. I wish he had more English friends. I'm afraid my four years in England have rather spoiled me for Otto's set here. If it were not for you, indeed, and one or two others now and again, things would be rather dismal. Stocks, shares, companies, and diamonds, reiterated day after day, are apt to weary female ears. I sometimes long to shake myself free from it all. Yet, as you know, here am I, a sort of prisoner at will.'

Frank, who had been pouring out more tea, now placed his chair a little nearer to his companion's as he handed her her cup.

'Come,' he said, 'a princess should hardly talk of prisons. Why, you have all Kimberley at your beck and call, if you like. Why don't you come down from your pedestal and make one of your subjects happy?'

'Ah!' she said, with a little sigh, 'my prince hasn't come along yet. I must wait.'

Frank, I am afraid, was getting a little out of his depth. He had intended his last speech to be diplomatic and had manifestly failed. He looked up into the glorious star-lit sky, into the blue darkness; he felt the pleasant, cool night air about him; he looked upon the face of the girl by his side—its wonderful Spanish beauty, perfectly enframed by the clear light of the lamp. There was a shade of melancholy upon Nina's face. A little pity, tinged with an immense deal of admiration, combined with almost overpowering force to beat down Frank's resolutions of an hour or two back. He took the girl's hand into his own, bent his head and lightly kissed it. It was the first time he had ventured so much, and the contact with the warm, soft, shapely flesh thrilled him.

'Don't be down on your luck, Nina,' he said. 'Things are not so bad. You have at all events some one who would give a good deal to be able to help you—some one who?'

At that moment, just when the depression upon Nina's face had passed, as passes the light cloud wrack from before the moon, a man's loud, rather guttural voice was heard from within the house, and a figure passed into the darkness of the garden. At the sound the girl's hand was snatched from its temporary occupancy.

'Hallo! Nina,' said the voice of Otto, her brother, 'any tea out there? I'm as thirsty as a salamander.'

The tea was poured out, the conversation turned upon indifferent topics, and for two people the interest of the evening had vanished.

Next morning, early, Frank Farnborough found a note and package awaiting him. He opened the letter, which ran thus:

'KIMBERLEY (In a dickens of a hurry).

'MY DEAR FRANK—Have just got down by post-cart, and am off to catch the train for Capetown, so can't possibly see you. I had a good,

Chambers's Journal
Apr.
if r
your
you
up i
bush
dry
How
Prob
durin
the c
if no
shall
time,

Fr
acter
parce
half
the c
and
in go
'I
to hi
eveni
and
perfec

The
bath,
not s
to sk
in co
taking
be m
dinne
pared
got i
up h
the l
upwa
cover
then,
opera
was
paren
and
to ne
on e
rema
he c
knife
piece
put
some

'H
'they
these
into
Hi
was
Now
—dif
that
stare
betw
unlik
and
he e
ment
Wor
He

if rather rough, time in Mangwato. Knowing your love of natural history specimens, I send you with this a small crocodile, which I picked up in a dried, mummified condition in some bush on the banks of the Mahalapsi River—a dry watercourse running into the Limpopo. How the crocodile got there, I don't know. Probably it found its way up the river-course during the rains, and was left stranded when the drought came. Perhaps it may interest you; if not, chuck it away. Good-bye, old chap. I shall be at Kimberley again in two months' time, and will look you up.—Yours ever,
HORACE KENTBURN.'

Frank smiled as he read his friend's characteristic letter, and turned at once to the parcel—a package of sacking, some three and a half feet long. This was quickly ripped open, and the contents, a miniature crocodile, as parched and hard as a sun-dried ox-hide, but otherwise in good condition, was exposed.

'I know what I'll do with this,' said Frank to himself; 'I'll soak the beast in my bath till evening, and then see if I can cut him open and stuff him a bit; he seems to have been perfectly sun-dried.'

The crocodile was bestowed in a long plunge bath, and covered with water. Frank found it not sufficiently softened that evening, and had to skirmish elsewhere for a bath next morning in consequence. But the following evening, on taking the reptile out of soak, it was found to be much more amenable to the knife; and after dinner, Frank returned to his quarters prepared thoroughly to enjoy himself. First he got into some loose old flannels; then tucked up his sleeves, took his treasure finally out of the bath, carefully dried it, placed it stomach upwards upon his table, which he had previously covered with brown paper for the purpose, and then, taking up his sharpest knife, began his operations. The skin of the crocodile's stomach was now pretty soft and flexible; it had apparently never been touched with the knife, and Frank made a long incision from the chest to near the tail. Then, taking back the skin on either side, he prepared to remove what remained of the long-mummified interior. As he cut and scraped hither and thither, his knife came twice or thrice in contact with pieces of gravel. Two pebbles were found and put aside, and again the knife-edge struck something hard.

'Hang these pebbles!' exclaimed the operator; 'they'll ruin my knife. What the dickens do these creatures want to turn their intestines into gravel-pits for, I wonder?'

His hand sought the offending stone, which was extracted and brought to the lamp-light. Now this pebble differed from its predecessors—differed so materially in shape and touch, that Frank held it closer yet to the light. He stared hard at the stone, which, as it lay between his thumb and forefinger, looked not unlike a symmetrical piece of clear gum-arabic, and then, giving vent to a prolonged whistle, he exclaimed, in a tone of suppressed excitement, 'By all that's holy! A fifty carat stone! Worth hundreds, or I'm a Dutchman.'

He sat down, pushed the crocodile farther

from him, brought the lamp nearer, turned up the wick a little, and then, placing the diamond—for diamond it was—on the table between him and the lamp, proceeded to take a careful survey of it, turning it over now and again. The stone resembled in its shape almost exactly the bull's-eye sweetmeat of the British school-boy. It was of a clear, white colour, and when cut would, as Frank Farnborough very well knew, turn out a perfect brilliant of fine water. There was no trace of 'off-colour' about it, and it was apparently flawless and perfect. South African diamond experts can tell almost with certainty from what mine a particular stone has been produced, and it seemed to Frank that the matchless octahedron in front of him resembled in character the finest stones of the Vaal River diggings—from which the choicest gems of Africa have come.

Many thoughts ran through the young man's brain. Here in front of him, in the compass of a small walnut, lay wealth to the extent of some hundreds of pounds. Where did that stone come from? Did the crocodile swallow it with the other pebbles on the Mahalapsi river, or the banks of the adjacent Limpopo? Why, there might be—nay, probably was—another mine lying dormant up there—a mine of fabulous wealth. Why should he not be its discoverer, and become a millionaire? As these thoughts flashed through his brain, a hand was laid on his shoulder, and a merry feminine voice exclaimed, 'Why, Mr Farnborough, what have you got there?'

Frank seized the diamond, sprang up with flushed face and excited eyes, and was confronted with Nina and her brother, both regarding him very curiously.

Otto Staarbrucker spoke first. 'Hullo, Frank! You seem to be mightily engrossed. What's your wonderful discovery?'

The Englishman looked keenly from one to another of his interrogators, hesitated momentarily, then made up his mind and answered frankly, but in a low, intense voice.

'My wonderful discovery is this. Inside that dried-up crocodile I've found a big diamond. It's worth hundreds anyhow, and there must be more where it came from. Look at it, but for God's sake keep quiet about it.'

Staarbrucker took the stone from Frank, held it upon his big fat white palm, and bent down to the lamp-light. Nina's pretty, dark head bent down too, so that her straying hair touched her brother's as they gazed earnestly at the mysterious gem. Presently Otto took the stone in his fingers, held it to the light, weighed it carefully, and then said solemnly and sententiously, 'Worth eight hundred pounds, if it's worth a red cent!'

Nina broke in, 'My goodness, Frank—Mr Farnborough—where *did* you get the stone from, and what are you going to do with it?'

'Well, Miss Nina,' returned Frank, looking pleasantly at the girl's handsome, excited face, 'I hardly know how to answer you at present. That crocodile came from up-country, and I suppose the diamond came from the same locality. It's all tumbled so suddenly upon me, that I hardly know what to say or what to think. The best plan, I take it, is to have a

good night's sleep on it; then I'll make up my mind in the morning, and have a long talk with your brother and you. Meanwhile, I know I can trust to you and Otto to keep the strictest silence about the matter. If it got known in Kimberley, I should be pestered to death, and perhaps have the detectives down upon me into the bargain.'

'That's all right, Frank, my boy,' broke in Staarbrucker, in his big Teutonic voice; 'we'll take care of that. Nina's the safest girl in Kimberley, and this is much too important a business to be ruined in that way. Why, there may be a fortune for us all, where that stone came from, who knows?'

Already Otto Staarbrucker spoke as if he claimed an interest in the find; and although there was not much in the speech, yet Frank inly resented the patronising tone in which it was delivered.

'Well, I've pretty carefully prospected the interior of this animal,' said Frank, showing the now perfectly clean mummy. 'He's been a good friend to me, and I'll put him away, and we'll have a smoke.'

For another two hours, the three sat together on the stoep at the back of the house, discussing the situation. Staarbrucker fished his hardest to discover the exact whereabouts of the place from whence the crocodile had come. Frank fenced with his palpably leading questions, and put him off laughingly with, 'You shall know all about it in good time. For the present you may take it the beast came from his natural home somewhere up the Crocodile River.* Presently the sitting broke up, and they retired to their respective rooms. Nina's handshake, as she said good-night to Frank, was particularly friendly, and Frank himself thought he had never seen the girl look more bewitching.

'Pleasant dreams,' she said, as she turned away; 'I'm so glad of your luck. I suppose to-night you'll be filling your pockets with glorious gems in some fresh Tom Tiddler's ground. Mind you put your diamond under your pillow and lock your door. Good-night.'

Otto Staarbrucker went to his bedroom too, but not for some hours to sleep. He had too much upon his mind. Business had been very bad of late. The Du Toit's Pan mine had been shut down, and had still further depressed trade at his end of the town, and, to crown all, he had been gambling in Rand mines, and had lost heavily.

Otto's once flourishing business was vanishing into thin air, and it was a question whether he should not immediately cut his losses and get out of Kimberley with what few hundreds he could scrape together, before all had gone to ruin.

This diamond discovery of Frank Farnborough's somehow strongly appealed to his imagination. Where that magnificent stone came from, there must be others—probably quantities of them. It would surely be worth risking two or three hundred in exploration. Frank was a free, open-hearted fellow enough, and although not easily to be driven, would no

doubt welcome his offer to find the money for prospecting thoroughly upon half profits, or some such bargain. It *must* be done; there seemed no other reasonable way out of the tangle of difficulties that beset him. He would speak to Frank about it early in the morning. Comforted with this reflection, he fell asleep.

THE FAR DISTANCES OF OUR UNIVERSE.

By AGNES GIBERNE,

Author of *Sun, Moon, and Stars; Radiant Suns, &c.*

It is not accidentally, but on purpose, that the word 'our' is used in the name of this article. 'The' universe would be quite as correct, because 'our' universe is 'the' universe to us who live in it; and yet the distinguishing adjective might here mislead men's minds through failing to carry out its own proper office. Those who hear 'the universe' spoken of as descriptive of the stellar system do not always distinguish between this universe and other universes, between 'our' universe and universes which are not 'ours.'

It seems to be somewhat of a pity that the word has been allowed to fall into this particular use, as descriptive only of a starry system. Its original meaning, as defined in an etymological dictionary, is 'the universal or whole system of created things;' and until recent years 'the Universe' included the idea of all creation. Then the fact began to dawn upon astronomers that our particular starry system was *not* all creation, and one and another began to apply the word 'universe' to our starry system in particular, while other possible starry systems were also spoken of as 'other universes.' The alteration is somewhat of a pity, because there would seem to be no other word equally good to take its place in the old sense. One may speak of 'Creation' as inclusive of all universes or starry systems; but it might perhaps have been better had 'universe' been allowed to retain its proper meaning, as synonymous with 'all creation,' and as inclusive of all starry systems. Possibly we may yet in the course of years revert to this older signification of the term.

That such other starry systems do exist can hardly be questioned. Wide as are the limits of the stupendous system of stars, within which our little earth finds a home, that system has limits; it is not infinite in extent. Far, very far, as its distances reach, there is a surrounding belt of space, wherein the stars of our universe grow thinner and yet more thin, dying slowly out, like the scattered trees on the verge of some vast forest. And beyond those scattered border-stars is a mighty and dark void. But beyond the void other universes surely lie; not *our* universe, but brother universes to ours; perhaps greater in extent than the one in which our lot is cast. Whether the faintest gleam of light ever travels to us from those starry systems is a question which cannot be answered, because it depends upon other questions which still remain unsolved;

* The Limpopo River is in South Africa universally known as the Crocodile.

but that they actually exist we can hardly doubt. All astronomical analogies point in that direction. Beyond granting their probable existence, however, we know positively nothing about those outer systems of stars. We have enough to do in trying to explore our own.

The universe—our universe—the one starry system of which we can know anything definite, is composed of our sun with his attendant worlds; and of all the stars visible to us in the sky, whether seen by the naked eye or through telescopes, together with their attendant worlds; and of most if not all of the star-clusters and nebulae scattered among the stars.

'How far off are the stars?' asks somebody of an inquiring mind; and he is perhaps told in answer that such a star is so many thousands of millions of miles away, that such another is so many billions of miles away, that yet another is so many hundreds of billions of miles away. And very likely he shakes his head over the information, feeling that all three figures are alike to him. Millions are millions, and billions are billions; but the idea conveyed by both expressions, as applied to measurement of distance, is simply one of enormous extent. Millions and billions are much the same in one's imagination. If we wish to form any definite notion as to the extent of our starry system, it is best to begin with objects nearer at hand, and to widen the distance gradually in thought to those objects which lie farther off.

In all the heavens, with the exception of passing meteors or meteorites, not one body occupies a position closer to earth than the moon, which is some two hundred and forty thousand miles away. Very far, of course, side by side with any earthly distances, but a mere fraction side by side with other astronomical distances. Next to the moon our nearest occasional neighbour is Venus, and then Mars. Both Venus and Mars, however, are often farther away from us than the sun, which remains always at somewhere about the same distance, roughly at from ninety to ninety-three millions of miles. This dividing space between sun and earth is of great importance in thinking about the stars, and it should be clearly impressed upon the mind. Next to the sun, in point of nearness, come the more distant planets; Jupiter, which is about five times as far from the sun as our earth is; Saturn, nearly twice as far as Jupiter; Uranus, nearly twice as far as Saturn; and Neptune, nearly three times as far as Saturn. All these planets belong to our sun, all are members of his family, all are part of the solar system. The size of the solar system as a whole, consisting thus of the sun and his planets, including our earth, may be fairly well grasped by any one taking the trouble to master two simple facts. They are these—that our earth is roughly about ninety-two millions of miles away from the sun, and that Neptune, the outermost planet of the solar system, is nearly thirty times as far distant from the sun as our earth is.

Despite the actual greatness of the Solar System, as expressed in miles, it may be looked

upon as something very small indeed, compared with the vastness, the immensity, of the Stellar System—that 'universe' of which our entire solar system forms but one insignificant spot. To gain any true idea of the universe, it has been needful to begin with our sun's system; and a small beginning it is. Small in one sense. Our earth's diameter, eight thousand miles, is large if compared with the distance which divides London from St Petersburg, but it is a trifle compared with the gap which separates our earth from the moon. And the space between earth and sun, though vast if compared with that which divides earth from moon, is a mere *bagatelle* compared with the abyss which intervenes between our solar system and the nearest star.

Some people find a curious difficulty in mentally distinguishing between stars and planets. Again and again they hear that stars are suns, and that planets are worlds, that a sun is not a world, and that a planet is not a star; and their confusion of mind on the subject remains untouched. Yet the distinction is not really difficult to grasp, and to see it clearly is quite essential to any understanding of the heavens. Our sun is a star, brother to all those twinkling points which lie scattered over the night-sky. Our world is not a star but a planet, sister to the few shining but non-twinkling bright bodies which appear to wander slowly among the stars. The planets belong to our solar system—all of them, without exception, that we are able to see. Other planets belonging to other stars may and doubtless do exist in countless millions through the universe; but we have no power to detect their presence. They, like the planets which belong to our sun, shine by the reflected brightness of their particular star, not by their own intrinsic radiance; and so they cannot be seen at a very great distance. Any watcher, with eyesight and telescopes such as ours, gazing from the region of any star in the sky, outside our solar system, would see nothing whatever of the planets or the moons of our system. He might make out the sun, as a more or less dim star; he would not be able to detect Jupiter or Saturn, still less our little earth.

And it must be remembered that every single star in the whole universe lies outside our solar system, with only one exception. That exception is our sun. So by the Solar System we mean the little family or kingdom of one star, known to us as the sun; and that star is one of tens of millions of stars which all together make up the enormous Stellar System; and that stellar system is doubtless one of very many—perhaps millions—of stellar systems, all of which together make up the created Universe, using that word in its older and not in its more modern sense.

It is worth while making an effort to picture to ourselves the vast extent of the starry system, in which we reside. Having gained some faint notion of the extent of the lesser solar system, which occupies a small corner of the stellar system, we must work outward from that beginning. Let us take for our unit of measurement the space which separates earth from sun;

and let the ninety-two millions of miles of this distance be represented in our minds by one single inch. In proportion, the sun himself must be pictured by a tiny ball, less than one-hundredth of an inch in diameter; while our earth must be a mere speck, less than one-tenthousandth of an inch in diameter. And this little sun and this minute earth must be just one inch asunder.

Following out the same idea, Mercury and Venus, being closer to the sun than we are, have to be less than one inch away from him; while Jupiter will be five inches off, Saturn will be ten inches off, Uranus will be over nineteen inches off, Neptune will be almost thirty inches off. Then the solar system as a whole, leaving only out of the question certain comets which travel farther, will be enclosed in a circle, less than *two yards in diameter*.

The question arises next—what will be the proportionate size of the stellar system on this same scale of measurement? If the solar system is to be comprised with a hoop, not two yards across, how wide a space should we allow to the surrounding system of stars, 'our universe'? How near will be the nearest of outlying stars? And the answer is sufficiently startling. If the sun is reckoned to be one inch away from our earth, if Neptune is reckoned to be less than three feet away from the sun; then, on the same scale, the star which lies closest of all outer stars in the whole universe to us, Alpha Centauri by name, must be reckoned as lying at a distance of about *three and a half miles!* And between the two—nothing! At least, nothing in the shape of a star. An occasional comet may lag slowly along in the darkness, finding its way from one sun-system to another; and dark bodies, cooled suns, may possibly float here or there unseen by us; but of stars, radiant with heat and light, none are found in that wide area.

Astronomical writers sometimes talk of stars 'in the vicinity' of the sun; and this is what is meant by 'vicinity.' Think of the distances implied. Our whole solar system is first brought down into a small circle, two yards across—every inch in those yards standing for more than ninety millions of miles—and then, on every side and above and below, is an encompassing void of three and a half miles; every inch of those miles again representing more than ninety millions of miles. And then we come upon one gleaming star! Only one quite so near. Another star in the sun's 'vicinity,' known as 61 Cygni, would lie at a distance of seven miles; and the brilliant Sirius would be over ten miles off. Others must be placed at distances of twenty miles, fifty miles, one hundred miles. It is easy to start with a list of these figures; it is not easy to say where one should stop. That the starry system has limits we do not doubt; but to define those limits is not possible. On such a scale as is given above, those limits certainly would not lie within a distance of one hundred miles, nor of one thousand miles. It is believed that some dim stars, barely to be detected, may be ten thousand times as far away as our sun's nearest neighbour, Alpha Centauri; and this at once gives, even on our very much reduced scale, a

line from the centre of thirty-five thousand miles. Suppose that the limits of the stellar system lay somewhere about there. Thirty-five thousand miles each way from the centre would mean a diameter for the whole of seventy thousand miles. Imagine a starry system, seventy thousand miles across from side to side; each inch in those miles representing ninety-two millions of real miles; and somewhere in the midst of it our small solar system, just two yards across, separated from all other stars by a wide blank of three or four miles!

That would be stupendous enough. But we have no reason whatever for supposing that the limits of our universe do lie there. The true boundaries of the stellar system may be twice as far, four times as far, ten times as far. We do not even know with certainty that our solar system is placed anywhere near its centre, though this seems rather likely. Far off as the boundary reaches in one direction, it may reach much farther in another direction.

An illustration very commonly used, to convey some idea of star distances, is that of the passage of light; and an allusion to it here may tend to enforce the illustration already used. A ray of light travels at the rate of about one hundred and eighty-six thousand miles in one second. Light coming from the sun reaches us in less than nine minutes; and from Alpha Centauri in about four years and four months. Here again we have the wide surrounding void between our sun and all other stars. Here again we have to remember that beyond the nearer stars are multitudes of more distant stars, and that the light from them arrives here, not in four years, but in ten years, in twenty years, in fifty or a hundred years, in a thousand or five thousand years, and so on. Here again no limit can be definitely placed. It has been roughly calculated that the whole stellar system may perhaps consist of somewhere about one hundred millions of stars; but no doubt it may equally well consist of two hundred millions. It has also been roughly calculated, or conjectured, that the light of a star on one outer verge of the system may perhaps travel across the whole breadth of the system to the opposite outer verge in the course of some thirty thousand years—each instant of those thirty thousand years, darting through one hundred and eighty-six thousand miles of space. But the length of time occupied in this journey might equally well be fifty or sixty thousand years.

The entire universe must, one would think, be a marvellous tangle of star-beams; all these millions of suns sending forth each moment all their millions of light-rays; and all those rays, once started, travelling onward and onward in a direct line to the utmost extent of the system—how much farther still, who shall say!—unless stopped in mid-career. But although the rays are there in a sense, they are not visible as light, except when they strike upon and are checked by some object in their path. Space itself, through which these rays are hastening, may be said to be dark. The light is hidden till the beams are captured.

Another curious fact in connection with this

subject is the *historical* nature of starlight. What we see, when we look at the heavens, is the stars as they once were, not as they are at this moment. This is an oft-told truth, yet it can hardly be too often told, because it is not easy of realisation. Suppose that you are gazing at a distant lamp. You see that lamp as it was when the ray which now strikes your eye left it. No matter that the time between is very short; still it exists; for light always takes time to travel. If that lamp is put out, you continue to see it for a fraction of a second after its light has ceased to be. In the matter of a lamp, the fraction of time is too small to be appreciable; but in the matter of light from the stars, matters are widely different.

Here is a ray of sunlight resting on your face. That ray tells you of the state of the sun close upon nine minutes ago. It brings you a picture of the sun, as the sun was then. It does not tell you of the condition of the sun now, at this instant.

Look at bright Sirius, shining and twinkling in the sky. The ray of light that impinges on your eye-ball tells you what Sirius was like, more than ten years ago. It is quite conceivable that Sirius may no longer be exactly like that. Within the last six months Sirius *might* have undergone a collision with some other star, and might have blazed up in consequence with a tenfold splendour. Not at all likely, of course; but not among events utterly impossible. If things were so, the news would come to you, brought by star-beams travelling from Sirius—not to-morrow, or next year, but somewhere about ten years or more hence. From now till then all rays coming in from Sirius would have started before the collision took place, and so they would be able to say nothing about it. Speaking in human language, they would not know anything of that collision.

Or look through a telescope at some tiny star, invisible to the naked eye. The light from that star perhaps left its surface before the time of William the Conqueror. It may be—it is not quite impossible—that the tiny star has since those days actually left off shining; but still we see it in our sky, because the rays which started while it yet shone are arriving moment by moment, telling us the story of what the star was like, hundreds of years ago, before it parted with its brightness.

Perhaps again we are examining through a large telescope a faint and far-off nebula; a mass of whirling gases, the light of which has taken, say, ten thousand years to get here. We see what the nebula was like in prehistoric ages. It may since then have lessened in size and changed in shape. It may now wear a very different aspect; and men looking from earth, ten thousand years hence, will be able to see what that nebula was like in our days. All these things help us to understand what the immensity of the stellar system is—and yet more, to imagine dimly what the measureless extent of all creation must be, if many such star-systems float side by side throughout the vast domains of space.

One other fact must not be lost sight of; and this is, the rapid and incessant motion of

all the stars. Our starry system is no fixed and rigid mass. We talk indeed of 'fixed stars,' and our ancestors believed in them; but we now know better. The constellations keep their respective shapes through ages, yet such a phenomenon as an immovable star is not found in the universe. Not a star in the heavens remains ever for two consecutive seconds in the same place. Every distant sun is on the steady rush toward some goal; and each sun carries with him, wherever he goes, all his attendant worlds and satellites.

Our sun is speeding through space at the rate of many hundreds of thousands of miles each day; nevertheless, the enormous distance which separates us from the nearest star is not apparently thereby diminished. That is to say, we cannot see, we cannot take cognisance of, the diminishment. So wide and vast is the dividing chasm, that if our sun were to continue steadily onward at his present rate, and if the motion were straight towards Alpha Centauri, and if Alpha Centauri remained for ages where he is, we should not approach the actual neighbourhood of that star in less than one hundred and fifty thousand years.

And with other stars it is the same. They, too, are hastening onward, this way and that way. Most of them are doubtless held in and controlled by the whole mass of their companion-stars, each exerting a measure of attractive power over all the rest. Some few stars are known to be whirling along at speeds so terrific, that it has been seriously questioned whether all the stars in the stellar system can possibly hold them in—whether they are not mere passing visitants from some other starry system or universe, coming out from the black vista on one side, passing through our midst during a few millions of years of journeying, then plunging into the dark vista on the other side, never to return.

Things may be so. We know little about the matter; and until we can at least roughly number the stars of which our stellar system is formed, we cannot possibly calculate the power of control which they unitedly possess over any individual in their midst. If things were so, it would be, on a much vaster scale, somewhat analogous to the visitations of strange comets, often known in our solar system—comets coming from other sun-systems, passing among the planets, then rushing off in a new direction. We are a great deal more at home in affairs of the Solar System than in those of the Stellar System.

These wondrous 'far distances' of the universe, using the word in either its narrower or its wider sense, bring a sense of oppression and of bewilderment. Not miles upon miles, but millions of miles upon millions of miles are heaped together, till the brain refuses to accept the offered load. But, while it is not possible to picture to ourselves the reality of those immeasurable wastes, amid which distant stars at wide intervals are found to float, it is possible, by some such method as is offered above, to gain a notion of the *comparative* proportions of the world we live in, of the smaller system to which our world belongs, of the vaster system of which that little system forms a part, and of the

stupendous Universe of all creation, throughout which stars and star-systems innumerable are scattered like fine gold-dust by the Hand of the Divine Creator.

THE MASTER CRAFTSMAN.*

By SIR WALTER BESANT.

CHAPTER XII.—MUTINY.

IN this manner was the emancipation of Isabel begun. It was effected, you have seen, by making her physically strong and well, by giving her courage, by providing her with something to think about, by relieving the monotony of her life, and, lastly, by the introduction, the treacherous introduction, of Love the Rebel.

'You've done wonders for the girl,' said the Captain one day. 'Wonders, you have. I don't hardly know her, she's so changed. Why, she sings now, and she plays her music half the day and every day. She that used to be such a shy and timid thing, afraid of her own voice. Perhaps, Sir George, he would never abandon the title, it gave him a sense of self-importance to be talking with a baronet; 'perhaps you don't notice these trifles, but you must have seen the change that's come over the puddings.'

'No—really? Over the puddings?'

'There's a lightness about them, more jam, since the girl got brighter. Ah! It's quite natural. When the soul is heavy, the pudding comes out heavy too. And the teas are quite remarkable compared with what they were. There's a spiciness about the cake now.'

'Well, Captain, do you think that Robert has noticed any change?'

'No. He never notices anything.'

'Don't you think, Captain, that a word from you—'

'No, sir. He won't listen to one word, nor a thousand words, from anybody.'

'Consider, your daughter's happiness is at stake. Can any girl like to go on year after year engaged to a man who treats her with absolute neglect and icy coldness? Is it fair to keep a girl going on in this way year after year? Could he not, at least, take back his promise and set her free? You are her father; it is for you to interfere.'

The Captain froze instantly. 'Perhaps, Sir George, under ordinary circumstances that might be so. But you forget that we have eaten Robert's bread and slept under his roof for five years, and you forget besides that he is the most masterful man in the world, and he means to have his own way.'

'Still, to marry a girl against her will'—

'How do I know that it is against her will? To be sure she's a little afraid of him—many women are afraid of the man before they

marry. Afterwards it's different, and let me tell you, sir, that most women like a man to be masterful. They get their own way fast enough; but they like him to be masterful.'

'Perhaps; but this neglect of Robert's'—

'Never mind that. He'll make it up when they do marry. It's all there, only bottled up. These bottles do pour it out when the time comes—in the most surprising manner. You'll see what an appreciative husband he'll make some day. Let things be, Sir George. You've brought her health and roses; Robert, who will be grateful when he notices it, will do all the rest. I daresay she frets and peaks a bit for want of the kissing and the fondling that all girls naturally expect. Let her have a little patience, I say. And don't let's disturb things when they are comfortable, especially the puddings.'

We spoke no more of love. We continued to go about together with free and unrestrained discourse. As the evenings began to close in, we ceased the long journeys to villages and village churches, and took picture-galleries and concerts instead on Saturday afternoon. Or I remained in the evening at the house, while Isabel played and sang to me; she played much better already, and she sang with untrained sweetness. One evening, when the pianoforte was loaded with new music and new songs, and the books she was reading—she laid her hands upon them all. 'You have given me everything,' she said. 'But these things are only alleviations. The future is always before me—dark and horrible. Oh! I pray that it may be postponed so long as to become impossible. I shall grow old and ugly, and then I hope he will take back his promise.'

'Unless,' I said, 'he can be induced to take it back before.'

Then an incident took place which disquieted me very much indeed—a very dangerous incident. It was this: Robert was in his study after dinner forging an oration. Isabel was in the parlour practising. On the table was a bundle of papers and certain blue-books. He took up the books and began to turn over the leaves, marking passages. He wanted these passages copied to be used in his speech. He took paper and pen and began to copy. Then Isabel's playing reminded him of her. He got up, opened the door and called her.

She came obediently. That afternoon she was dressed in some light blue stuff with a ribbon and a flower, because she now loved a little touch of finery. The soft cheek, the depths of her eyes, her light feathery hair, her ethereal look might have moved the heart of St Anthony. So far they had produced no impression at all upon her lover.

He nodded when she appeared: nodded pleasantly: he had a very fine speech nearly ready: he had learned it by heart: it was certain to carry the people away: he only wanted these extracts copied.

'Take these blue-books,' he said, with the old tone of command. 'You will find the pages marked with a red pencil. Copy out all the

* Copyright reserved in the United States of America.

passages marked, and let me have them by to-morrow morning.

'I am no longer your clerk, Robert.'

'What?'

'I say that I am no longer your clerk. You released me three months ago. Had I continued, I believe I should have been dead by this time. I will not copy passages for you.'

'Isabel?' He was amazed.

'Let us understand each other. I am your housekeeper. I will do for the house anything and everything. I am not your clerk or your private secretary or your accountant. You must get some one else to do that work for you.'

'Isabel?'

'I am grateful to you for taking us in, and keeping us all these years. If you think I ought to do more for my father's maintenance and my own, I will give up and try for another place.'

'You are a fool, Isabel,' he said roughly.

'Very likely. Is it polite to tell me so? You have learned a great deal about the world of late, Robert; do you think it is polite to call the girl you are engaged to—a fool?'

'No—no—of course, I didn't mean that. But—Isabel—what in the world has come over you?'

He actually saw the change at last, or something of the change; not all of it, otherwise the subsequent history would be different. It was the very first time that the girl had ever refused work, or objected, or complained. For four or five months there had been slowly going on under his eyes the transformation of which you have heard; but because it was so slow and gradual, and because he was always completely absorbed in himself, and because he had never thought it necessary to consider the appearance of the girl at all, having still in him so much of the working man as not to desire beauty in his wife, and not to think about it—he had observed nothing. Now, however, when the word of resistance and refusal opened his eyes, he was amazed to see standing before him in the place of the mild, meek maiden, who humbly took whatever he gave, and humbly executed whatever he commanded, always with downcast eyes and hanging head, a lovely, airy, fairy creature, too dainty altogether for such a man as himself, a beautiful, bright, sunny girl, a head held upright, and steady eyes that met his own without the least fear or show of humility.

'Isabel!' he repeated, 'what in the name of wonder has come over you?'

'I don't know. You have been thinking about your own affairs, I suppose. But oh—it is nothing.' She turned to leave him, being, in fact, frightened at the admiration expressed in his eyes for the first time—quite a new expression, and it terrified her horribly.

'No, no; don't go, Isabel;' he leaned back in his chair. 'You are looking so wonderfully well, and—pretty this afternoon.'

She began to tremble. Robert to say things complimentary?

'There is nothing more to say, is there?'

He leaned his chin in his left hand, and replied slowly. 'I remember now. George talked to me about you, Isabel, when he first

came. He said you were overworked. I don't always remember, perhaps, that you are only a girl. I may have given you too much to do.'

'I am only housekeeper now.'

'Very well, then. I don't mean to be unkind, you see. But, of course, I can't be always thinking about your health, and your whims, can I?'

'Of course not.'

'George said you wanted fresh air, and a change, and exercise, and all kinds of fiddle-faddle stuff, and to see how other girls carry on—so as to take your proper place when I have advanced myself. Well, I told him I wished he would take care of you, and take you about a bit, seeing that I couldn't afford the time myself. Has he taken you about?'

'Yes. All the summer. He has been most kind and generous.'

'George is that sort of man, I believe. Ready to waste any amount of time in dangle after a girl. Well, Isabel, as I could not dangle after you, I am very much obliged to him. And I must say that the change is wonderful. You look ever so much better. Your face, which used to be too pale, is full of colour, and your eyes are brighter—and—why, Isabel, give me your hands.'

He held out both hands, but Isabel made no response. And there was that look in his eyes which frightened her. He got up, not hastily, not like a Passionate Pilgrim, but slowly and with the dignity of possession and authority. Isabel trembled and shook. Between herself and the door stood Robert. She could not run away. She thought of crying for help—her father was in his own room—but a girl can hardly call out for protection against the threatened kiss of her engaged lover. And perhaps he didn't mean it after all. Yet his eyes looked hungry.

In the corner beside the fireplace stood one of those revolving bookcases filled with books; a heavy thing which turns round when pushed with zeal and vigour. Isabel retreated behind this bookcase. 'Let me go,' she cried. 'Do not touch me.'

'I don't want to hurt you,' he said. 'Come out of that corner, Isabel. Why, you are not a baby, and you are my girl. Come out quietly, and don't be silly.'

'No—you promised—you said that there should be no—no'—

'Oh! yes. Stuff and nonsense! I said so, I daresay. I couldn't interrupt work and distract my thoughts with fondling and kissing. Not to be expected. Besides, that was a year ago and more, and you were not the girl then that you are now. Come, Isabel, don't be shy.'

'No—no—I won't have it. I couldn't bear it. Oh, horrible! Let me go.' She gave the bookcase a vigorous shove, and it revolved ponderously with its weight of a hundred books. Robert fell back.

It is not pleasant for one's sweetheart to speak of a threatened kiss as horrible. His face grew dark.

'You are going to marry me, Isabel, I believe.'

'Not yet: not for a long time yet. Not till

you are an Archbishop of Canterbury, or something. And until we do marry, Robert, I will take you at your word. There shall be no fondling, as you call it.'

'When you marry me you will have to obey me. There can only be one master in one house.'

'I am not your wife yet, remember. I am not at your orders except as your housekeeper. Pray do not imagine that you have any right to command a woman because she has promised to be your wife. After I am your wife—if ever I am'—

He wavered. 'Of course,' he said, 'I cannot command your obedience so long as you are not my wife. But come out from that retreat and sit down and let us talk. I will not attempt to command you in anything. Perhaps we need not wait so long as first we thought. Perhaps—as soon as I am in the House'—

'No,' she replied. 'You must promise to let me go, or I will stay behind this bookcase all night.'

'You can go then, Isabel,' he replied, flinging himself into his chair. 'I will not stop you.'

She passed out without a word. But she was shaken: she went to her own room and sat down to think. Was Robert, too, changing? Was his ancient indifference turning into admiration: and though her experience of the manly heart was small, she felt by instinct that admiration might at any moment leap into passion: and passion into a demand for the fulfilment of her promise. 'Oh!' she groaned and cried, 'I cannot marry him—I cannot—I cannot—I would rather die.'

But she told no one, not even her physician. And that evening the furrow reappeared on her brow, and the cloud on her face, and Robert coming into tea saw again the maiden meek and mild, and wondered what had become of the princess, and why he had experienced, if only for a brief moment, that novel and singular feeling of admiration.

'George,' said Robert after tea, when we were alone. 'Women are queer, skittish creatures. There's Isabel now.'

'Yes. There is Isabel.'

'Formerly I had only to lift my little finger and she ran. She'd do just as much work as I pleased to order. To-day she flatly refused to do anything.'

'Quite right.'

'And when I told her—a man may surely say so much to his own girl—that she was changed and improved—which she certainly is—thanks to you—she wanted to run away.'

'Did she?'

'And when I offered to kiss her—a man may surely kiss his own girl—she shrieked out and ran behind the revolving bookcase.'

'Oh! Did she. But, I say, Robert, didn't you promise that there was to be no kissing and fondling and stuff?'

'Well—well—I did, I daresay. But who wanted to kiss the girl a year ago? It's different now. She's become an amazingly pretty girl. If it wasn't for this election business I would—I certainly would'—

'Better not,' I said solemnly. 'Much better not—yet.'

And now you understand how disquieting this incident was.

REMINISCENCES OF TYNESIDE.

Up to little more than half a century ago, the population, wholly seafaring, of the weather-beaten, salt-encrusted, muddy little seaport of Shields 'knew less of England and its people than of countries across the ocean and their multifarious inhabitants.' An isolated position, bad roads, and intense local jealousies were accountable for this; these hardy and unruly townfolk were indeed a people apart, embittered by centuries of battling for their rights, sometimes even their very existence, with their big bullying neighbour up the water, Newcastle. If these North Sea sailors, fishers, smugglers, or whatever else they might be, knew little of England, England for its part knew as little of them, and likely enough cared less. Nevertheless, North Shields has a romance and a history all its own, interesting even for those who know nothing of the town save the name. In *The 'Maister', a Century of Tyneside Life*, by George H. Haswell (Walter Scott, 1895), although mainly a biography of Mr Haswell's father, Thomas Haswell, for fifty years a well-known and respected citizen of Shields, we have a most interesting and curious account of the seaport and its tempest-tossed life. While giving an historical account of Shields from the earliest times, the book deals more particularly with the last hundred years.

At the beginning of the century, when the Great War was in full swing, the 'sentinel of the Tyne' enjoyed an importance it never had before, and has barely had since. Shields, at that time, consisted of a single long narrow street, composed of old-fashioned, high-peaked houses, jumbled together in no particular order. One side of the street rested against the high 'Banks' of the river; the other, on the water's edge, was propped up by wooden piles slanting out into the stream. 'Scarce a house on the river-side but had its ruinous wharf or its gaudy-painted balcony, on which a few fresh herring, "split and peppered," were hung out to dry among the newly-washed duds which bellied out in the wind. Here and there a ship's bowsprit, reaching across the street from a vessel in one of the graving-docks, might be seen hospitably accommodated by an opened window into which it projected, the good woman at her housework or toilet chatting nonchalantly with the sailor who, busied with some mending of its gear, sat astride the spar.'

Squalid and dirty as it was, Shields was an uproarious place. It had then, as now, a large coal trade, and the crews of the colliers, with men-of-wars' men, and seamen of almost every

nationality, crowded the wharves, streets, and closes. From the tap-rooms of the many public-houses 'came the scratching rhythm of a horn-pipe, the discordant uproar of a sea-song with tipsy chorus, or the clamours of a drunken fight. Jack-tars capered to wretched fiddle or hurdy-gurdy, or leaped out of crazy casements to squirt the well-churned succulence of a sapid quid at the bumboat woman, who was chaffering below with a mate or stevedore, or bandying unfeminine compliments with a sister crafts-woman.' The stay-ashore part of the community—most of those who did not go to sea had something to do with ships—were as roistering and riotous as their seafaring brethren; and, altogether, noise, riot, and confusion generally, reigned from morning to night, and just as often from night to morning.

Strange and exciting sights were to be seen here too, as was to be expected in a seaport situated in the very thick of the fight, as it were. In the end of 1799 seven transports, carrying upwards of one thousand Russians and Cossacks—a remnant of the Duke of York's expedition to Holland—were driven into the Tyne through stress of weather. These truly strange foreigners, decidedly uncleanly, 'but very religious, strong, and robust,' came ashore in droves, and the Cossacks especially were objects of absorbing interest, being followed about by admiring groups, and the gorgeous and dazzling uniforms of the officers completely turned the heads of the female portion of Shields. This is, perhaps, the only instance of a Russian descent in force (although fortunately a friendly one) on our shores; always excepting, of course, these unfortunate Muscovites, who, more than fifty years afterwards, were compelled to accept our hospitality, much against their will. The fear of a hostile descent was ever present, and to guard against surprise, a heavy chain was stretched across the river-mouth, with windlasses at each side to haul it taut on occasion. Vessels were frequently chased into the Tyne by the enemy's cruisers or privateers; once, five hundred Schaeveningen fishing-boats found refuge there. The boom of hostile guns was no unusual sound to a Tynesider's ears; the inhabitants of Shields would often hasten down, or rather up, to the 'Banks' to watch a desperate sea-fight, or to follow the frigate 'under tremendous press of sail, mark down some unlucky foreign cruiser.'

Such was Shields at the beginning of the present century. Like other seaports, it had its full share of the attentions of the press-gang, and that institution was as cordially hated here as elsewhere. Many were the fierce and sometimes bloody encounters between the press-gang and the infuriated citizens; now and then the former came badly off, especially at the hands of the ship-carpenters, a resolute and pugnacious body, who had constituted

themselves the special protectors of the harassed and persecuted Shields mariner. A tender or war-vessel was permanently stationed at Shields to receive the involuntary recruits for his majesty's service; some of these, however, managed to escape, either by cunning or by strategy. 'A sharp old South Shields "salt," on being impressed and taken on board the tender, ran up against the lieutenant on deck and instantly begged pardon—"he couldn't help it, he was so short-sighted." He was in consequence ordered over the ship's side and got off.' The lieutenant, apparently, was also short-sighted, else he would have seen through such a shallow artifice. Another man showed more daring and presence of mind. 'A smart young sailor sauntering one day along the "Banks" was seized by the chief of one of the gangs, who, pointing a pistol at his head, pressed him in the king's name. "I have a protection," said the sailor, putting his hand into the breast of his jacket. "Let me see it then," demanded the other. "Now, you thief," retorted Jack, as he drew out a pistol and pushed the muzzle of it into the face of his discomfited captor, who was thus obliged to relinquish his prize.' Thomas Haswell's father, a Shields seaman, had in his time the misfortune to be pressed into the frigate *Lizard*. While off the coast of Ireland, he and another pressed man determined to escape by swimming to the shore, close to which the frigate at the time was anchored. On the first dark night, when the sentry's back was turned, they slipped into the sea from the port side and swam silently off. They swam on and on, but no land was reached; at last, hopeless and utterly exhausted, they were compelled to turn, and with the utmost difficulty regained the ship, luckily getting on board unobserved. Nothing would induce Haswell to try the venture again, but his messmate made the attempt next night, and was never more heard of. The cause of their failure to reach the land was a simple one, perfectly well known, but in the excitement of attempted escape, had been entirely overlooked. The ship swung with the ebb and flood, and therefore presented opposite sides to the land at each change. Just at that time the port side was next the land during the day, but at night the starboard occupied that position; they had, consequently, been swimming out to sea, and thus, no doubt, the unfortunate man who went off alone on the second night perished.

It was in the midst of this war, tumult, and riot, that the first free school was founded, at the instance of a few enlightened citizens of Shields, who thought this a better way of celebrating King George's jubilee, than by spending the money collected for that purpose in fireworks. But 'eddicashin' was in those days looked upon by many as a thing not to be countenanced in any degree whatsoever. As a Shields shipowner indignantly exclaimed, 'Eddicashin! eddicashin? Noa! we'll syun hev nee sarvints!' Another weighty argument against education, especially in a place like

Shields, whose seafaring inhabitants at that time had more risks to encounter than they were subjected to by the elements, was

For mickle waste he counteth it would be
To stock a head with bookish wares at all,
Only to be knocked off by ruthless cannon-ball.

The Royal Jubilee School was opened in 1811, but, owing to the almost universal objection to educating the masses, the learning which the trustees thus freely offered was so hedged in by restrictions that it was very poor plant indeed. Spelling, the Bible, and Watts's Hymns were about the only things taught, for the trustees, as the only means of surmounting opposition, availed themselves literally of good King George's desire that every poor child in the kingdom should be able to read his Bible.

After the Peace, Shields quietened down, and in the course of years was enlivened by few noteworthy events. The town grew, and spread over the 'Banks;' shipbuilding and the coal trade flourished, and the Low Street, in face of desperate opposition, was stormed by the sanitarians. But it was the beginning of the forties before the railway penetrated to Tyne-side. Being thus cut off from the outer world, old customs and old traditions lingered long. The French feud was not yet forgotten, and a visible remembrance was the number of old cannon, which perchance in their day had breathed death and defiance against the enemy from the decks of doughty Tyne colliers, but which now, stuck muzzle downwards in the ground, served as convenient boundary marks or mooring posts. There were certain occurrences, however, all too frequent, which never lost their vital import to the wives and mothers of Shields, whose husbands or sons manned the fleet of colliers and other craft belonging to the Tyne. These were the North Sea gales. During winter, especially, a sudden north-east or south-east gale would strew the iron-bound coasts with the wrecks of unfortunate vessels caught on the lee-shore, or in a futile effort to seek the shelter of the Tyne.

Such scenes, as before remarked, were and are to some extent still to be witnessed, even in this age of steam. At the height of a gale the lifeboat may be of no use, and the ship goes to destruction. And in the Jubilee School, when the 'Maister' would call the roll next morning, Dixon, or Boyce, or little Thomson, will be returned absent, and some small shrill voice will utter the quite familiar explanation, 'Please, sir, his father's drooned!'

For in the year 1839, and in his thirty-second year, Thomas Haswell had returned as master to the school in which he had received the elements of his education. The general system of education at this time 'was dull, monotonous, and stereotyped, lacking every element of vitality. The lesson-books were written by persons devoid of capacity for (to say nothing of experience of) teaching; many were couched in a tone of ponderous priggishness and turgid self-satisfaction wholly detestable to any healthy mind.' It may readily be supposed that there was no sort of attraction here for the average boy, and especially for the untamed boy of Shields. Mr Haswell saw

that something besides this kind of 'education' was required, and he gradually established a system of his own; he, in fact, anticipated by more than a generation, modern methods of education. But he had many and great difficulties to contend with, for, the school being kept afloat by voluntary subscriptions which did little more than meet current expenses, there was no money to spare for innovations or 'crazes;' and all that he did was by his own contrivance or at his own cost. The first 'craze,' introduced in his first year, was vocal music, which was a tremendous success, and gave the boys a new interest in school. His next innovation was maps, but, being unable to buy them, he painted, in gigantic proportions, the two terrestrial hemispheres on the wall. This gave the lads a living interest in geography, and the subject became a favourite one with them. 'For years the Jubilee lads were recognised, and feared, by Shields skippers, as tartars at geographical cross-examination.' Astronomy next was introduced; astronomy led to geometrical drawing, but Mr Haswell had to manufacture his own instruments. Free-hand drawing, on black-boards and slates, had by this time established itself. Reading the newspapers, for the advanced boys, was early introduced. 'The "Maister" perceived the inestimable advantages to be derived from the systematic use of the newspaper as a source of fluent idiomatic English.' As time went on, Mr Haswell introduced new scientific subjects, and even drill and gymnastics, as soon as he could procure the necessary apparatus. The success of these experiments in education was speedily apparent. In a very few years the number of scholars increased from forty (the number when Mr Haswell became master) to two hundred. There was no more playing truant; the boys were as anxious to attend school as parents were to have their children admitted.

Affairs were thus progressing most favourably for master and scholars, and to the great satisfaction of the trustees, when the passing of the Education Act in 1870 brought matters to a sudden crisis. Some of the subscribers refused to continue their subscriptions to the up-keep of the school, on the ground that they could not both pay taxes and give voluntary subscriptions for the same object. This compelled the trustees, if collapse was to be averted, to put the school under Government inspection in order to secure the Government grant. There was no help for it, and Mr Haswell had the humiliation of having to undergo an examination, after being for thirty years a successful master, as to his fitness to conduct a school! He passed. But the golden days were over. For now commenced a system of 'narrowing down,' and amazing schemes and codes were invented, which at first harassed the 'Maister,' and eventually disheartened him. In 1880 the Jubilee School was turned over to the Tyne-mouth school board, and in 1886, the 'Maister,' in his eightieth year, and the forty-ninth of his mastership, laid down the reins, to pass the short remainder of his days in well-earned rest. He died in 1889; no man in Shields more respected or regretted, by high or low,

rich or poor, than he. The ruling passion was strong in death, and the closing formula of each day's work was the closing words of his life, 'Slates away, boys!'

WHAT IT FEELS LIKE TO FIGHT A DUEL.

By C. J. CUTCLIFFE HYNÉ.

I.

THOUGH I am perhaps the least quarrelsome man in the world, it has been my fate to fight no less than two duels. One I confess to have sought; the other was thrust upon me: both occurred during the nineties of this nineteenth century. In each I received some bodily hurt.

The first of my duels took place in a small town of southern France. I was a resident there for the winter, had a tiny bachelor villa, and (through former acquaintance with the place) was on pretty intimate terms with a good many of my neighbours. There was an English element in the place, but the French of course predominated, and it was with the Frenchmen I usually found myself. The man with whom I fought was a *Provençal*, born close by.

He was a big, straggling fellow, lean, and with a bright bird's eye that was always glittering on you. He was a gentleman undoubtedly, had been educated in Marseilles, and had never wandered fifty miles from the Riviera coast. He was probably the most narrow-minded man that ever lived, and, on a diet of books and Anglo-phobe newspapers, he had imbibed a blind and poisonous hatred for the British nation that was unique in its completeness. His name was D'Arblay, and he called himself my friend.

That was the funny thing about the man. He cultivated the society of Englishmen, and individually (I think) he liked them. He was eternally running down *perfidie Albion*, but nobody took much notice of that. The Englishman who lives abroad is so entirely confident about the superiority of his own Island that he doesn't often break out in the patriotic vein. It isn't his way. Besides, he finds that one short pitying smile often serves his purpose better than a whole volume of talk.

Now for two years I had endured D'Arblay's revilings of my native land with no more forcible retort than a series of these pitying smiles; and I think in the end he began to hate me, for one day, without warning, he started on a fresh topic which he must have known was calculated to wound me deeply. He commenced to talk mild evil about some one I cared for very much indeed, and that in a club-house before the ordinary mixed gathering of other men.

I warned him once, twice, and a third time; and he always said he meant no harm, and turned off what I had said with easy badinage, and continued his theme. But at last I saw, or thought I saw, his motive, and a hot anger boiled up in me.

'D'Arblay,' I said, 'if you want to fight, say

so like a man. But drop talking about that girl, or I shall throw this inkstand at your head.'

'M'sieu,' he retorted, 'I dispute your right to be the censor of my conversation. The lady in question'—

I threw the inkstand.

The glass missed him, but the black fluid spirted over his face, and the technical insult had been given and received.

He bowed formally and left the club-house. I spoke to a couple of my friends and followed his example. Later, he appointed two seconds, and they consulted with mine; and a time was fixed for the meeting, and swords were chosen as the weapons.

D'Arblay was an average swordsman. I had seen him practise with a *maître d'escrime*, and had gauged his powers pretty well. For myself I knew of the art of fencing absolutely nothing whatever; and when everything was snugly arranged for the duel, I thought of this fact with something more than annoyance. I particularly did not want to be killed, because—well, because a certain lady had promised to marry me within a short time, and I—well, I did not want to disappoint her. And there was no backing out of the duel. One could afford to laugh at such a meeting in England. But in France it is another matter. Even the English winter residents would have looked askance at me if I had tried to disentangle myself. Moreover, there was another thing, more dangerous than wounds or death, and that was ridicule. A man may put up with being killed, but he cannot endure being laughed at. So I made up my mind that if D'Arblay did not disable me first, I would leave my mark on him in a way there was no mistaking. Mind I did not want to kill the fellow, only I did not intend to be mixed up in an affair which the newspapers could define as 'Another bloodless encounter,' and dismiss with a jeering paragraph.

So to sum up: I went on the field determined on forcing a serious fight, and a good deal fearing lest I myself should be the one to suffer.

We drove out to the place of meeting in the early morning, with a keen mistral blowing which chilled one to the bone. The others arrived simultaneously. There was quite a congregation of us: four seconds, two doctors, and the principals. But D'Arblay, being a Frenchman, liked a crowd, and I had to bow to the etiquette of the country whether I fancied it or not.

No politeness could have been more punctilious than ours, and none more icy. We two principals stripped to shirt and trousers, and I stood on the frost-rimed grass in my stocking feet. D'Arblay was opposite me, smiling grimly. We saluted one another with the bare glittering rapiers, and a second took up position behind each of us, standing ready with a walking-stick to knock up the blades at the least sign of a foul stroke. At least so I was warned. To myself I was wondering what a 'foul stroke' might be, so ignorant was I of the very elements of fencing. But I said nothing about this, and when D'Arblay crossed blades

with mine, I engaged him with whirling fury.

The blue steel flashed and stabbed a thousand circles in the chill morning air, and a pang of fear gripped me by the heart. I seemed to feel his blade passing through me in a hundred places. Death appeared inevitable. Every second I marvelled at finding myself alive.

To myself I accepted a mortal wound as inevitable; but I lusted to get my own blade through D'Arblay's body before I was killed. I could hardly see him. Our panting breath hung gray under the cold morning sun, so that we fought in a clammy mist. I lunged and *passaded*; barely guarding at all; fighting on the offensive only, through sheer greed of getting in my own blow before I was *hors de combat*.

Then, before I knew what was happening, the duel ended. I was conscious of a feeling somewhere or other of a sear as with a hot iron. I understood that it meant I was wounded, and dully wondered where, though without being able to locate the hurt. I saw the walking-sticks of the seconds up-rise to beat down our weapons, and at the same moment I heard D'Arblay utter a shriek of pain. A heavy cane clashed down on my blade, and I drew back nearly burst for want of breath. These things take long to tell, but the whole of them had happened simultaneously—within one tick of a clock.

The surgeons rushed up to us with lint and bandages. Blood was running from my fingers on to the rapier's hilt. D'Arblay had scored my right fore-arm with a shallow gash a dozen inches long. He himself was in a worse case: I had run him through the shoulder.

My seconds tried to hold me back, but I was too warmed up to care much for the etiquette of the French duello then. I strode across to where D'Arblay lay in the surgeon's hands, with the blood pattering from my fingers on to the grass.

'M'sieu will apologise, I hope? I may mention that the lady is engaged to me.'

'I didn't know it,' said my opponent. 'Why didn't you tell me before? My dear fellow, I am most abominably sorry for having chattered. You have given me a pig of a stab, and that ought to settle accounts between us. Will you come and breakfast with me when we're both tied up?'

One of the seconds murmured at this informality.

'Sir,' I said, 'if you have anything to complain of, may I hear it?'

'Monsieur,' he replied, 'I think we had better consider this affair as ended now.'

II.

The other duel in which I took part was none of my seeking. It happened last year in Florida, where my wife and I were spending the winter, and was thrust upon me in a manner little short of murderous.

The beginning was in this wise: I detected a man cheating at cards. I was not playing myself, but the cheating was done to swindle a fellow who was my friend; and because I

saw it, beyond shadow of doubt, I called out to him to stop play. Of course there was a row, and (if the sharper had not been in a minority of one) there might well have been shooting, after the custom of the country. But as it was, the thing was utterly flagrant; indeed, the man himself did not attempt to deny it; and he went away scattering nothing more dangerous than venomous wordy threats. We were left triumphant possessors of the field, and I waxed pedantic to my friend over the danger of playing games of chance for coin of the realm with casual hotel acquaintances. Three days later I went off into the Everglades alligator shooting, and for deer also, if I could come across any.

Now what the sport was like will not be spoken of here in detail. Sufficient to mention that amongst other things I came upon an orchid which I imagined to be new, and all thoughts of shooting were for the time submerged beneath the ardour of the collector. I laid down my rifle (a Remington '400) against the stem of a magnolia tree, and began to feast my eyes upon the trails of hanging blossom.

I suppose I must have dawdled there a full hour, sketching, measuring, taking notes, culling specimens, when of a sudden something went *visp* past the top of my head, and then close to, sounded the noisy crack of a heavy rifle. By a sort of useless instinct, the first thing I did was to start backwards and to duck my head; the next, to stare wildly round me. A glance showed beyond question where the bullet had come from. Down a glade of live-oaks, not sixty yards away, a man was busily engaged in slipping a fresh cartridge into the breech of a rifle, which had gray smoke-wreaths still crawling slowly from its muzzle. It was the fellow I had exposed for cheating at cards.

As I gazed, he finished loading, and sharply raised his weapon. I turned and ran like a frightened dog, zigzagging in my course to confuse his aim, and making for the magnolia tree. There I snatched up my own rifle, and darted behind the trunk.

I stopped and listened. Not a sound was to be heard which rose above the warm hum of the insects and the other never-ceasing noises of the forest. I could not doubt but that the man was watching me and waiting for his next opportunity to pick me off. My gorge rose at the thought of him. Brute! If he could fire a sitting shot at an unsuspecting man, I knew what I had to expect, and what I must do, if my own life was to be saved. I had got to depend on myself alone. In that solitude the next human creature might be twenty miles away.

Thud!

A bullet had struck the tree, and the noise of the shot came close upon its heels. I swung out from behind the trunk and lifted my rifle, when another shot whistled out from beneath the live-oaks, and I was poorer by the loss of an ear-lobe. My own bullet rattled harmlessly amongst the tree-twigs, and I strode back to shelter raging and bleeding.

The passion of murder burned in me then like

a torch. The heat of the day seemed to have passed completely away. The perspiration which stood on my body turned cool as an ice-douche. Never before had my thoughts gushed up with such clearness and strength. It was a duel to the death between me and the sharper, and he had drawn first blood, and I had got to win.

The words seemed floating in the hot air before me—'Kill! kill! kill!'

I had reloaded the Remington, and stood with ears strained to catch the slightest sound which told of my enemy's moving. Till that moment I had supposed that his rifle was a repeater. Now another idea came to me. There had been two reports; one short and sharp, the other heavier, and more noisy. Of course, the thing was clear. He had fired a revolver shot first, to draw me from my cover; had dropped the smaller weapon the moment he pulled trigger; and had fired on me with the rifle directly I emerged from cover. The fiendish cunning of the man made my hate for him glow in me like a draught of raw spirit.

All idea of fairness (if indeed such had ever occurred to me) was completely swept away by that time. I would fight him by his own methods. The only question was one of means. As matters stood, I lay ensconced behind the stem of the magnolia, and if I stepped out of its shelter I should have to take his fire before I could get in my own. As a snap-shot I was very conscious of my own deficiencies; from observation I had gained a high estimate of his skill.

But a brain working at the pressure which mine was put to then, yields up unexpected fruits; and when the idea did at last come to me, I could have sung for very joy. But there was too much danger in it to increase the risks unnecessarily. I slung my rifle by its strap across my shoulder, and turned round and commenced to climb the magnolia.

The stem had been split by lightning, or I could not have got up without my hands being seen round the sides, and as it was, the climb to the first branch was desperately hard; but I had the strength of ten men in me then, and the silent wiliness of a Seminole; and I gained the cover of the foliage without having made a slip, or cracked a twig.

With the caution of a lynx I made my way up the ladder of branches, going higher and higher till there was barely one layer of the dark green shining leaves between me and the burning sky above; and then I looked about me till I found a steady seat; and then I unslung the Remington from my shoulders. I brushed the rustling curtain of leaves softly aside with the muzzle, and peered out. My enemy was on his old ground, standing beneath the live-oaks with his rifle at the ready. Some indefinable suspicion must have got hold of him, for at that moment he looked up.

The reports of the two rifles rang up into the heated air simultaneously—but—mine was the better aim. His bullet whistled through the dark green leaves a foot from my head: mine broke his right elbow-joint.

I reloaded and hailed him. There was a pool of black water on the nearer side of the live-oaks, and the snout and eyebrows of an

alligator showed upon the surface like two knots of dead-wood.

'Take your rifle,' I said, 'and that revolver, and throw them into the water.'

He hesitated, nursing his wounded arm in the palm of the other, and glaring at me like a fiend.

'Quick!' I said. 'If you take time to think twice more, I'll shoot you dead.'

He picked up the weapons one by one, and then dropped them into the water with sullen splashes. The reptile in the pool, frightened by the noise, sank down to the mud below, where they lay.

'Now,' I said, 'go!' and he went, and I watched till he was out of sight amongst the tree-trunks and the saw-grass.

Then I climbed down, and gathered my orchids, and went home by another way, keeping a very sharp lookout. I trusted little to that man's chivalry.

I have seen another fellow cheat at cards since then, but that was in South America, and I did not feel called upon to interfere. Two duels have been quite enough for me.

KAURI GUM.

PROBABLY not very many of our readers have heard of kauri gum. It is a kind of fossil resin, the product of the giant kauri, a tree only to be found in the extreme north of New Zealand, and which at the present rate at which it is being destroyed, will probably soon be extinct. The gum is found in the ground, in lumps from the size of a pea to that of a man's head, or even larger. Its principal use is for making varnish, a great deal of it being shipped for this purpose to Europe and the United States. The extraction of the gum from its native soil gives occupation to many thousands in New Zealand who would otherwise be reckoned among the unemployed. To start as a gum-digger no great capital is required, nor is any experience necessary. A spade, a tent, some few utensils, and a fortnight's rations are all that is necessary, and these can often be obtained on credit from the local shopkeepers. Some diggers use a spear for piercing the ground to ascertain the presence of gum. If the spear, in its course through the ground, encounters any obstacle, the experienced digger can tell from the feel whether the object so struck is gum, and can distinguish it from a stone, root, or any other obstacle. Equipped only with his spade, and a bag on his back to hold the gum which he may find, the digger sets out in the early morning, and returns at night with a quantity of gum which may vary from fifty-one to two hundred and one pounds, or more; one hundred and one pounds a day is considered a good average.

The average earnings of the digger may be twenty or twenty-five shillings; some gain more, and many gain less. In this, as in every other business, of course, the most experienced are the most successful. The life is a hard one, and, as a general rule, none but those who have

been used to hard work make a success of it. Yet it is a life that for many is not without its charms. To a person of a roving disposition it presents many attractions, not the least of which is, that the digger is his own master. He works when he likes, and leaves off when he likes. Whenever he feels inclined for a holiday, he takes it, and there is no one to say him nay. Among the diggers are to be found all classes of men. Many of them are educated, and some formerly occupied a good position in society. On more than one occasion we have seen men born to a title working on the gum-fields. In every camp of gum-diggers, professional men are to be found, many of whom have had a university education. As a rule, the gum-diggers are an orderly and law-abiding population. The professional criminal seems to avoid the gum-camps; perhaps the work is too hard, and the excitements too few for him. I have known many people who lived in close vicinity to the gum-fields, and although it was not the custom to lock any of the doors at night, nothing was ever missed.

The gum-fields are an invaluable resource to New Zealand, for so long as they last, there need be no cry from the unemployed. Any able-bodied man can make a living on them, if nothing more. The life of the digger is a monotonous one in many respects. As a rule, the gum-fields are situated in somewhat inaccessible localities, those nearer to the towns having long since been worked out. He has no society beyond that of his mates, and may go for months without seeing a newspaper, which the average New Zealander accounts no small hardship. On the other hand, he is safe from the temptations of the city, and it is seldom that the dram-shop is near enough to secure his daily custom.

He sees few new faces, unless it be the messenger sent out weekly or monthly by the nearest shopkeeper who supplies him with rations. The digger, be it noted, is extremely particular as to the quality of his supplies; nothing but the very best will suit him. Cocoa is much used on the fields, but none but the best brands find any sale there; the same applies to all other articles of food.

On Sunday the digger is generally kept busy cutting firewood for the week, washing clothes or repairing them, and sundry other jobs. He may also employ his spare time scraping the gum so as to fit it for the market; this is generally done in rainy weather, when outdoor employment is impossible. And here it may be noted that the gum-fields of New Zealand are among the rainiest places on earth. The writer spent more than a month on them, and there was not a day (of twenty-four hours) in which rain did not fall, and about two days out of every week were such as to preclude the idea of work.

We would not advise any one to go out to New Zealand with the express intention of turning gum-digger. Besides the hardship of the life (which, however, may have its attractions to a young man so long as the novelty lasts), the gum-digger is universally looked down on and despised by every other class of colonist. New Zealand as a country is democratic enough,

more so, perhaps, than any other country on earth, and labour is not held in contempt as in England. Every man is considered as good as another so long as he gains his living honestly. Perhaps the only exception is in the case of the gum-digger. 'He is only a gum-digger,' you will hear a colonist say, and this is intended to stamp the man referred to as an outcast.

Of late years a number of Austrian labourers have emigrated to New Zealand with the express intention of taking to gum-digging, and have thereby incurred the hearty dislike of all professional diggers. These Austrians are notorious on account of their laborious and thrifty habits, their only fault in the eyes of the colonists. A man who can live on sixpence a day is not a fair competitor in their opinion, and the Austrians are boycotted accordingly.

The gum-fields are rapidly becoming exhausted, and in a few years more the gum-digger will be as extinct as the dodo. Even now the size of the pieces of gum to be obtained is becoming smaller every year, and the digger is glad to pick up fragments of gum now, which in the earlier days he would have passed over with contempt, as not worth the trouble of lifting. The fields have also been dug and re-dug, until in most parts it is impossible to find a patch of ground the size of an ordinary room (unless it happens to be an absolutely barren patch) which has not already been turned over; and the best results are now being obtained by digging under the former workings, which entails a great deal of labour. Notwithstanding these facts, the number of diggers increases every year, though most competent authorities consider that the gum deposits, at the present rate of working, cannot last another thirty years, and they will probably cease to be remunerative before this time. The competition of other gums, such as Manila gum, also threatens the product of the kauri.

RESURRECTION.

I WRAPPED around me tight a cloak of scorn;
'Thou fool! Believe no more,' I, mocking, said,
Dragging my weary feet o'er paths forlorn,
Not heeding how they bled.

For I had trusted, therein there lay the smart,
Had trusted one who, smiling, did me wrong,
Entering the singing places of my heart
To silence all its song.

Not all earth's loveliness bade me rejoice,
Life's fairest flower lay stained with disgrace;
And, when I heard the music of Love's voice,
I turned away my face.

Yet this May morn she comes, as oft of yore,
And, lo, from my dark soul a veil is rent;
She lays my tired head on her breast once more,
And speaks her old content.

MARY DANIEL.

Printed and Published by W. & R. CHAMBERS, Limited,
47 Paternoster Row, LONDON; and EDINBURGH.